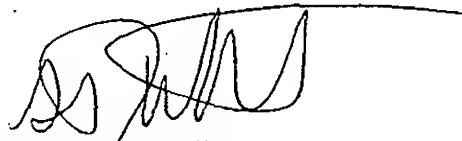


04-643

AMENDMENT II TO THE MEMORANDUM OF UNDERSTANDING AMONG THE  
FEDERAL MINISTER OF DEFENSE OF THE FEDERAL REPUBLIC OF  
GERMANY, THE MINISTER OF DEFENSE OF THE REPUBLIC OF ITALY,  
AND THE SECRETARY OF DEFENSE OF THE UNITED STATES OF  
AMERICA CONCERNING COOPERATION ON PROJECT DEFINITION AND  
VALIDATION OF A MEDIUM EXTENDED AIR DEFENSE SYSTEM.

I certify this amendment to the Memorandum of Understanding between the Department of Defense of the United States of America, the Federal Ministry of Defense of the Federal Republic of Germany, and the Ministry of Defense of the Republic of Italy to be a true copy of the original document signed by Dr. Jacques S. Gansler, Under Secretary of Defense (Acquisition, Technology & Logistics).



STEVEN C. WINKIE  
International Affairs Directorate  
Ballistic Missile Defense Organization

AMENDMENT II  
TO THE  
MEMORANDUM OF UNDERSTANDING  
AMONG  
THE FEDERAL MINISTER OF DEFENSE OF THE FEDERAL REPUBLIC OF GERMANY,  
THE MINISTER OF DEFENSE OF THE REPUBLIC OF ITALY,  
AND  
THE SECRETARY OF DEFENSE OF THE UNITED STATES OF AMERICA  
CONCERNING  
COOPERATION ON PROJECT DEFINITION AND VALIDATION OF A MEDIUM  
EXTENDED AIR DEFENSE SYSTEM

The Federal Minister of Defense of the Federal Republic of Germany, the Minister of Defense of the Republic of Italy, and the Department of Defense of the United States of America, hereinafter referred to as the "Participants":

On May 28, 1996, entered into a Memorandum of Understanding concerning cooperation on the project definition and validation of a Medium Extended Air Defense System (MEADS) and signed an Amendment I on December 16, 1996.

Whereas the Participants have successfully conducted a cooperative program for the concept definition aspects of the Project Definition/Validation (PD/V) phase and have conducted a competitive source selection process wherein one international prime contracting entity has been selected to continue in the MEADS Program; and

Whereas the Participants intend to pursue the following efforts leading to the completion of the Project Definition/Validation Phase and continue funding of the PD/V Phase to allow the Participants to conduct a Risk Reduction Effort (RRE) before proceeding with the negotiation of a new Memorandum of Understanding for the Design and Development phase of the Program.

Whereas the National Armaments Directors of Germany, Italy, and the United States on behalf of the respective Ministers of Defense and of the Secretary of Defense of the United States, have signed a Statement of Intent on January 17, 2000 reflecting this program restructuring.

Now therefore, the Participants have agreed to amend the PD/V Memorandum of Understanding as follows:

1. The table of CONTENTS is amended by inserting after "ANNEX A COMPETITION RULES": "ANNEX B TERMS AND CONDITIONS FOR THE USE OF THE PAC-3 MISSILE IN THE MEADS PROGRAM".
2. SECTION I – DEFINITIONS is amended by inserting the following new definitions:
 

"Backward / Forward Compatibility	Backward and forward compatibility for the MEADS and PAC-3 missile means that despite any hardware or software design modifications both missiles retain the ability to be automatically recognized, designated, launched and controlled by either the Patriot or MEADS systems utilizing the full extent of inherent system capability within their respective performance envelopes"; and
"Proof of Integration and Function	The proof of integration and function is a demonstration that the prototype Major End Items (MEI) perform as an integrated system and that all critical functions of the MEI and the system occur and interoperate in a manner and sequence as specified in the industrial proposal concept"; and
"Prototype MEADS System	A prototype MEADS system is intended to consist of the essential hardware, software, and system integration elements necessary to demonstrate the full functionality of MEADS fire control and having the capability of conducting a missile flight. As a minimum, critical elements of the BMC4I and the fire control radar must be developed and integrated with the PAC-3 missile. The "prototype" test articles are developed in the context of an overall set of simulations, which will be used to demonstrate system performance (including surveillance functions) of the objective MEADS. The demonstration may include a fully integrated combination of end items, components, sub-components, hardware in the loop simulations, and digital models and will leverage previous and on-going contractor and government development and demonstration efforts to the greatest extent possible."
3. SECTION II, paragraph 2.3, is amended by deleting the number "2005" and inserting in lieu thereof the number "2009".
4. SECTION III is amended by deleting the whole section and inserting in lieu thereof the following new section:

### SECTION III - SCOPE OF THIS MEMORANDUM OF UNDERSTANDING

3.1 This MOU defines the general principles and the provisions under which the Participants will carry out together the PD/V phase of the MEADS Program, hereinafter called the "Project".

It is the common understanding of the Participants that the final MEADS system will not include any components, hardware or software, which are not releasable to all Participants unless otherwise agreed by the Steering Committee.

This MOU does not establish any obligation with respect to the subsequent phases of the Program and participation in subsequent phases will depend upon signature of subsequent MOUs.

3.2 The objectives of the Project are:

- a) To define and validate through engineering analyses, simulations and demonstrations a MEADS which is compliant with the commonly agreed requirements of the Participants while taking maximum advantage of the technology existing in the countries of the Participants.
- b) To define a balanced cooperative Program to develop, produce in single source and support MEADS which has acceptable technical and financial risks for the Participants.
- c) To conduct the PD/V Phase of the Program which consists of two parts:
  - During Part I a system concept and a program plan is to be established in competition. It also contains the source selection as well as the preparations for the Part II.
  - During Part II the development risk is to be further reduced taking into account program changes introduced during Part I. This part of PD/V is also called Risk Reduction Effort (RRE). The RRE, whose scope is focused on reducing risk and cost of the critical elements of the system, is a step leading toward a full-scale development. The RRE shall be conducted over a period of 3 years, beginning in calendar year 2000.

3.3 Activities of the Part I consist of:

3.3.1 Defining and validating a common viable total system including support and training equipment.

- a) Issuing of an International Request for Proposal (IRFP) to two competing Industrial Entities and the awarding of two contracts for the PD/V phase.
- b) Conducting a requirements analysis and flowdown based on the International Technical Requirements Document (ITRD).
- c) Performing simulations and modeling.
- d) Performing integrated product development, design trade studies and value analyses.
- e) Defining a total system concept (i.e., operational, support, and training concepts and technical solutions).
- f) Preparing detailed technical specifications of the system and its prime items.
- g) Performing actions needed to minimize the risks.

h) Demonstrating critical functions and mitigating key technical issues associated with integrated systems performance for the proposed system concept through end to end digital and hardware in the loop simulations. These simulations may be supported by laboratory tests and supporting test experimentation data.

3.3.2 Establishing a program plan based on the principles set forth in para 3.2 for the joint design and development of the MEADS.

a) Reviewing the IICOR in consideration of the results of the work performed by industry and having the modified document approved by the relevant authorities.

b) Defining a detailed working program for the D&D Phase including the major outline of the work to be accomplished.

c) Obtaining proposals, with ceiling costs, for the design and development of the MEADS with estimates for the unit production costs on the basis of single sourcing and the life cycle costs of the system.

d) Obtaining proposals for an industrial management structure for the D&D Phase.

e) Jointly evaluating the proposals referred to under c and d above, under a Joint Source Selection Plan and reaching a common conclusion on this evaluation.

3.3.3 Part I of the Project will be initially conducted in competition by two industrial entities as defined in Section VIII. Work under this MOU also includes the submission of proposals by the two industrial entities covering the D&D Phase, the assessment of these proposals, and the selection of the industrial entity which will be in charge of the design and development contract if the participants decide to enter together in the next phase.

To this end, the Participants will proceed as follows :

Requirements for the D&D Phase will be issued to the two industrial competitors in due time to allow them to submit their proposals.

3.3.4 Competition for the D&D Phase is a critical element throughout the PD/V Phase. Source selection including establishment of criteria, assessment of the proposals, decisions and conduct of the source selection process will be accomplished by NAMEADSMO through a trilateral Source Selection Committee (SSC). The Prime Contractors will be given initial information regarding the source selection process in the IRFP. This information will be updated as decided by the SSC and provided to the Prime Contractors in a timely manner. NAMEADSMA will propose a source selection process patterned after the U.S. source selection process with necessary modifications to accommodate the Project requirements. The source selection process will be approved by the Steering Committee and the SSC. The SSC shall be comprised of one member from each Participant with the U.S. member serving as Chairman. SSC members shall be nominated by each Participant. Decisions and direction issued by the SSC shall be by unanimous consent of its committee members. After coordination with the Steering Committee, announcement of the selection will be made by the U.S. Chairman of the SSC. During the competition, the rules of Annex A will apply.

3.4 Activities of Part II (RRE) consist of:

3.4.1 Demonstrating the validity of the System Design incorporating the PAC-3 missile and reducing the overall technical, schedule, and cost risk in the MEADS Program. The Terms and Conditions for the use of the PAC-3 Missile in the MEADS Program are set forth in Annex B of this MOU.

a) Demonstrating a "proof of integration and functions" using a "prototype" MEADS system to validate achievement of specified capabilities at system and subsystem level. At a minimum the "prototype" system shall contain critical elements of the following major end items in the order of priority for the hardware and software development in Part II:

- (1<sup>st</sup>) Multi-function Fire Control Radar,
- (2<sup>nd</sup>) BMC4I, and
- (3<sup>rd</sup>) Mobile Launcher.

The surveillance radar shall be considered at the system level including the demonstration of appropriate interfaces to the other subsystems.

b) Demonstrating the full integration, designation and control of the PAC-3 missile.

c) Obtaining an updated Performance Assessment on system and subsystem level including PAC-3 missile; performance validation of the prototype by tests on system and subsystem level.

3.4.2 Overall program planning and preparing for the follow-on Design and Development Phase.

a) Updating the Program Plan for execution of all phases of the program including the transition from RRE to D&D, as well as a cost estimate and schedule for the overall MEADS program.

b) Describing in detail the integrated system solution, and obtaining updated System Performance and Prime Item Performance Specifications, incorporating the PAC-3 missile.

c) Documenting the design, including drawings in contractor format, of the prototype hardware and software developed in the program.

d) Obtaining a detailed Statement of Work, a costed Work Break Down, and Schedule for D&D with the updated D&D proposal.

e) Detailed planning for D&D to include Integrated Work-Time-Effort-Network Plan, Engineering Plan, Simulation & Test Plan, and Risk Management Plan.

f) Obtaining the Industrial Structure and the Work Sharing for D&D, including test ranges, targets and other government services that may be acquired through government agencies outside the prime contract.

3.5 The Risk Reduction Effort will complete the PD/V Phase of the program.

5. SECTION VI is amended by deleting the whole section and inserting in lieu thereof the following new section:

## SECTION VI - FINANCIAL PROVISIONS

### 6.1 Operational Costs and Budget

The performance of the total effort under this MOU excluding administrative costs of NAMEADSMA will remain under a Cost Ceiling of 180 Millions of equivalent US dollars in PD/V Part I, and under a Cost Ceiling of 231.8 Millions of equivalent US dollars in PD/V Part II (then year dollars). This Cost Ceiling which includes taxes and inflation except as stated in section XVII, may be changed only by amendment of this MOU.

#### 6.1.1 Cost Sharing

The costs under para 6.1 above are shared according to the following percentages resulting in the following national commitments:

For PD/V, Part I:

<u>Participant</u>	<u>Percentage Share</u>	<u>National Maximum Financial Commitments</u>	
Germany	25 %	71.1	MDM
Italy	15 %	43.794	BIL
U.S.	60 %	108.0	MUSD

For PD/V, Part II:

<u>Participant</u>	<u>Percentage Share</u>	<u>National Maximum Financial Commitments</u>	
Germany	28 %	62.95	MEURO
Italy	17 %	38.22	MEURO
U.S.	55 %	127.5	MUSD

#### 6.1.2 Currency Rates

For the purpose of calculating the Cost Ceilings mentioned under para 6.1 above and the national maximum commitments under para 6.1.1 above, the following currency rates will be used during the entire period of this MOU

For PD/V, Part I:

$$1 \text{ USD} = 1.58 \text{ DM} = 1622 \text{ IL}$$

For PD/V, Part II:

$$1 \text{ USD} = 0.97 \text{ EURO}$$

#### 6.1.3 Common Tasks

The costs of common tasks, which must be paid in the currency of only one Participant shall be paid in accordance with the percentage shares of 6.1.1 and the funds will be provided in the currency required.

#### 6.1.4 Funding

6.1.4.1 For the Operational Budget, the maximum cumulative obligation authority from each Participant for each calendar year is estimated in table 1 for PD/V, Part I and in table 2 for PD/V, Part II. The maximum financial cash flow commitment of each Participant in each calendar year is estimated in table 3.

Table 1: Cumulative Operational Budget (Prime and Support) (MEUSD)

Participant	CY96	CY97	CY98/99	Total	%Share
Germany	8.47	28.33	45.00	45.00	25%
Italy	5.09	17.00	27.00	27.00	15%
United States	20.34	67.97	108.00	108.00	60%
Total	33.90	113.30	180.00	180.00	100%

Table 2: Cumulative obligation based Operational Budget (Prime and Support) (MEUSD)

Participant	CY2000	CY2001	CY2002	CY2003	Total	% Share
Germany	20.40	46.50	62.20	64.90	64.90	28%
Italy	12.40	28.20	37.80	39.40	39.40	17%
United States	40.00	91.40	122.20	127.50	127.50	55%
Total	72.80	166.10	222.20	231.80	231.80	100%

Table 3: Maximum Cumulative Cash Flow (Prime and Support) (MEUSD)

Participant	CY2000	CY2001	CY2002	CY2003	Total	% Share
Germany	13.20	36.20	57.70	64.90	64.90	28%
Italy	8.00	22.00	35.00	39.40	39.40	17%
United States	25.90	71.20	113.30	127.50	127.50	55%
Total	47.10	129.40	205.90	231.80	231.80	100%

6.1.4.1.1 The yearly allocation shown above is the baseline estimate which can be varied upon agreement of the Steering Committee within the cost ceilings established in 6.1.1. Within the above limits, NAMEADSMA will prepare an obligation- based budget including a cash profile for project expenditures. The NAMEADSMA cash profile will show the amount required from each Participant in the required currencies. This budget estimate and cash profile will be submitted to the SC for approval.

6.1.4.1.2 Based on the cash requirements set out in the approved cash profile and subject to the appropriate implementation of the work done by industry, NAMEADSMA will periodically call forward from the Participants the amounts required to fund the Project. NAMEADSMA will issue such calls for funds in such time, as requested by the Participants, to allow them to make the required funds available at or before the due date. Those Participants who



have not funded by the due date will be liable for additional costs incurred as a result of late funding, however the Participants will try to find solutions for minimizing the above additional costs.

6.1.4.2 NAMEADSMA will be responsible for the payment of bills presented by the Contractors and will be provided with funds for this purpose by the Participants in accordance with para 6.1.4.1 above. Invoices presented by its Prime Contractor, or Support Contractors shall not be paid unless they have been validated by NAMEADSMA on behalf of the Participants.

6.1.4.3 NAMEADSMA will seek to minimize the impact of currency exchange. To this end NAMEADSMA will open the necessary interest-bearing accounts for each Participant for which it will have sole signatory and drawing rights. Interest will accrue to the Participant concerned. The Prime Contractor will be requested to open equivalent accounts. NAMEADSMA will use the funds referred to in para 6.1.4.1 above in the bank accounts to pay properly presented bills from Contractors.

## 6.2 Administrative Costs and Budget

### 6.2.1 Funding

The total administrative costs of NAMEADSMA shall be divided into two categories: the Administrative Budget for Services and Supplies and the Administrative Budget for Costs of Personnel.

6.2.1.1 For payment of the Administrative Budget, Services and Supplies, the maximum cumulative financial contribution of each Participant in each calendar year is estimated as follows:

For PD/V, Part I: Cumulative Admin. Budget: Services & Supplies (MUSD)

Participant	CY96	CY97	CY98/99	Total	%Share
Germany	.40	1.08	1.88	1.88	25%
Italy	.24	.64	1.12	1.12	15%
United States	.96	2.58	4.50	4.50	60%
Total	1.60	4.30	7.50	7.50	100%

For PD/V, Part II: Cumulative Admin. Budget: Services & Supplies ( MUSD)

Participant	CY2000	CY2001	CY2002	CY2003	Total	% Share
Germany	.70	1.35	2.00	2.70	2.70	28%
Italy	.42	.82	1.22	1.64	1.64	17%
United States	1.38	2.66	3.94	5.31	5.31	55%
Total	2.50	4.83	7.16	9.65	9.65	100%

6.2.1.2 For the Administrative Budget Costs of Personnel, the maximum cumulative financial contribution of Germany and Italy in each calendar year is estimated in the chart below. The United States will bear all the relevant costs of their assigned personnel. These costs are not included in the chart below. However, the total cost for U.S. personnel assigned to the NAMEADSMA will not exceed 15.36 MUSD for the PD/V phase.

For PD/V, Part I: Cumulative Admin. Budget: Cost of Personnel (MUSD)

Participant	CY96	CY97	CY98 / 99	Total
Germany	.75	2.31	4.19	4.19
Italy	.45	1.39	2.51	2.51

For PD/V, Part II: Cumulative Admin. Budget: Cost of Personnel (MUSD)

Participant	CY2000	CY2001	CY2002	CY2003	Total
Germany	1.64	3.56	5.56	7.77	7.77
Italy	.99	2.16	3.37	4.72	4.72

6.2.1.3 Within the above limits for each Administrative Budget NAMEADSMA will prepare an obligation based budget including cash profile for expenditures showing the amounts required in U.S. dollars. These budget estimates and cash profiles will be submitted to the SC for approval.

6.2.1.4 NAMEADSMA will open an interest-bearing account in US Dollars for which it will have sole signatory and drawing rights. Funds will be provided for this purpose by the Participants. Interest will accrue to the Participant concerned.

Based on the cash requirements set out in the approved cash profile and on the actual expenditures, NAMEADSMA will periodically call forward from the Participants the amounts required. NAMEADSMA will issue such calls for funds in such time, as requested by the Participants, to allow them to make the required funds available at or before the due date. Those Participants who have not funded by the due date will be liable for additional costs incurred as a result of late funding, however the Participants will try to find solutions for minimizing the above additional costs.

### 6.3 Additional provisions.

#### 6.3.1 Individual Participant's costs

The following costs will be borne entirely by the Participant incurring the costs or on whose behalf the costs are incurred and are not included in the above shared costs as referred to in para 6.1.4.1 and 6.2.1:

- a) Costs of national representation at meetings of the Project.
- b) Costs associated with any non-common national specific effort as identified by a Participant.
- c) Any other costs not expressly agreed as shared costs.

#### 6.3.2 Non-availability of funds

A Participant will promptly notify the other Participants if available funds are not adequate to fulfill its obligations under this MOU. If a Participant notifies the other Participants that it is terminating or reducing its funding for this Project, all Participants will immediately consult with a view toward continuation on a balanced modified basis. If no agreement is reached, the provisions of Sections XX and XXII will apply to that Participant.

#### 6.3.3 Financial Rules and Regulations (FRR)

Detailed financial procedures proposed by NAMEADSMA were approved by the SC. In principle, the provisions of NATO FRR relating to International Board of Auditors for NATO shall apply. If there are differences between this MOU and the FRR, the provisions of this MOU shall prevail.

#### 6.3.4 Personnel

6.3.4.1 The Participants will provide NAMEADSMA with a number of staff personnel basically equivalent to their percentage share as stated in para 6.1.1 above. Italy and Germany will nominate personnel to be contracted by the General Manager. The United States will elect to assign government personnel or fund the agency to fill these positions. US Government personnel will work under the operational control of the General Manager, and be governed by US Personnel Administrative Procedures.

6.3.4.2 Should a Participant not be able to fill its quota of staff within a schedule agreed to by the SC, the General Manager of NAMEADSMA will enter into appropriate arrangements with one or more of the other Participants in order to have the vacant post(s) filled. In the event that US has not provided personnel for a position within 6 months, the US will fund the agency to cover salary and related administration cost of filling such position.

#### 6.3.5 Test & Evaluation Services

The Participants NPOs shall sponsor the Participants and/or NAMEADSMA for test and evaluation services at their test ranges and Facilities, Services, and Equipment and shall arrange for such services to be provided at the rates/prices customarily of a national customer. In particular, the United States MEADS National Project Office is authorized to sponsor the Participants and/or NAMEADSMA for test and evaluation services at all US Department of Defense (DoD) Test Ranges and Facilities, Services and Equipment and to arrange for such services to be provided at rates/prices customarily of a DoD governmental customer.

#### 6.3.6 Government Facilities

Use of Government facilities, Services and Equipment provided to NAMEADSMA for joint program use shall be paid for according to the cost share according to 6.1.1, Part II, if the agency is charged for their use.

#### 6.3.7 Audits

The Participants accept that their National Accounting Organizations will have rights - without prejudice to the auditing competence of the NATO International Board of Auditors - to obtain at NAMEADSMA all information and inspect all records which in their views are required for auditing the national share or for informing their respective governmental authorities.

6. SECTION VIII, paragraph 8.1, is amended by deleting the words "as part of this MOU will be" and inserting in lieu thereof the words "in PD/V, Part I will be initially".
7. SECTION VIII, paragraph 8.3, is amended by renumbering it into "8.4".
8. SECTION VIII, is amended by inserting the following new paragraph "8.3 The tasks to be carried out by industry during PD/V, after Source Selection, will be performed by the winner of the source selection in PD/V, Part I." after paragraph 8.2.
9. SECTION IX is amended by deleting the whole section and inserting in lieu thereof the following new section:

#### SECTION IX - WORK-SHARING

9.1 During the period of this MOU, the share of work to be accomplished will be approximately equal to the following percentages:

For PD/V, Part I:

60%	United States
25%	Germany
15%	Italy

For PD/V, Part II

55%	United States
28%	Germany
17%	Italy

The work to be distributed includes work within the prime contracts and the work performed by government laboratories/agencies and technical support contractors.

9.2. The Prime Contractor and NAMEADSMA shall assure that the work is allocated to each Participant according to the following: technical skills of the Participants' industry, government labs, agencies and facilities; optimum use of existing technology; balanced distribution among the Participants industries of meaningful work of prime contracting, system level and subsystem tasks; reasonable costs using competition whenever possible, and the need to carry out the Project efficiently within the allotted time and budget limits.

9.3 The work will be carried out within the industries and/or government laboratories and agencies of the participating nations. Deviations from this principle are governed by the SC. If the SC grants a waiver to this principle, and unless it decides otherwise, all work allocated to a Participant or subcontracted to a third party will be considered as having been carried out by that Participant.

9.4 The division of work proposed by the Prime Contractor will be approved by the SC at the beginning of the contract and will not change in the performance of the contract unless decided by the SC. In the event of an intended transfer of work after it has been originally allocated, the SC will be informed and the transfer of work will be considered, for work sharing purposes, to

have been performed in the country to which it was originally allocated, unless the SC decides otherwise.

9.5 To measure the work shares allocated to the Participants the following provisions will be implemented;

9.5.1 Work shares will be measured by their contractual values at contract award expressed in one currency and using the same exchange rates as defined in Section VI.

9.5.2 Work-share will be calculated on the basis of value of contracts placed with the prime Contractor through third level sub-contractors. Sub-contracts placed below that level will count as part of the work-share of the Participant whose industry placed the sub-contract. To identify the allocation and costs of the work packages under contract, NAMEADSMA shall instruct the contractor to state the currency required and to add an identifier to the particular currency (i.e. EURO-GE or EURO-IT for GE and IT).

9.6 Services, activities or work not jointly funded by all Participants, and their impact on design, development and integration of the system, will be under the responsibility of the Participant requesting them and will not be included in the joint Project workshare arrangement as shown in para 9.1 above.

10. SECTION X, paragraph 10.2, is amended by deleting the sentence "However any use, sale, or transfer of Project Foreground Information outside of the MEADS Program requires the consent of the Participants."

11. SECTION X, paragraph 10.3.2, is amended by deleting the following words "on the MEADS Program only".

12. SECTION X, paragraph 10.4.1 b, is amended by making the second sentence a new paragraph c).

13. SECTION X, paragraph 10.4.1, is amended by adding the following new paragraphs:

d) The nationally approved time phased release plan for technologies and information will be noted by SC and incorporated to the RRE Contract.

e) Each participant agrees to undertake all necessary steps to decide upon the releasability of additional information which is requested by the contractor during the performance of the RRE contract within a timeframe of 90 days.

14. SECTION X, paragraph 10.4.2, is amended by deleting the words "source selection for the D&D phase" and inserting in lieu thereof the words "the beginning of the next program phase."

15. SECTION X, paragraph 10.5.2, is amended by deleting the following words "on the MEADS Program only".

16. SECTION X, paragraph 10.6.1 b, is amended by making the second sentence a new paragraph c).

17. SECTION X, paragraph 10.6.1, is amended by adding the following new paragraphs:

d) The nationally approved time phased release plan for technologies and information will be noted by SC and incorporated to the RRE Contract.

e) Each participant agrees to undertake all necessary steps to decide upon the releasability of additional information which is requested by the contractor during the performance of the RRE contract within a timeframe of 90 days.

18. SECTION X, paragraph 10.8.3, is amended by deleting the following words "on the MEADS Program only".

19. SECTION XIII, paragraph 13.1, is amended by deleting the term "31 July 1972" and inserting in lieu thereof the term "15 October 1997".

20. SECTION XX, paragraph 20.2, is amended by deleting the term "6.2.1 and 6.3.2" and inserting in lieu thereof the term "6.1.4 and 6.2.1"

21. SECTION XXII, paragraph 22.3 d), is amended by deleting the term "para 10.2 and" and inserting in lieu thereof the term "paragraph".

22. SECTION XXII, paragraph 22.4, is amended by deleting the whole paragraph and inserting in lieu thereof the following new paragraph:

22.4 The respective rights and responsibilities of the Participants regarding Section X (DISCLOSURE AND USE OF PROJECT INFORMATION), Section XI (CONTROLLED UNCLASSIFIED INFORMATION), Section XIII (SECURITY), Section XV (THIRD PARTY SALES AND TRANSFERS), Section XVIII (CLAIMS AND RESPONSIBILITIES), Section XIX (SETTLEMENT OF DISPUTES), and this Section XXII, will continue, notwithstanding termination of, withdrawal from, or expiration of this MOU.

23. SECTION XXIII is amended by deleting the words "one Annex, which is" and inserting in lieu thereof the words "two Annexes which are".

24. SECTION XXIII is amended by deleting the term "5 years" and inserting in lieu thereof the term "10 years".

25. After ANNEX A, the following new ANNEX B is added:

#### **ANNEX B - TERMS AND CONDITIONS FOR THE USE OF THE PAC-3 MISSILE IN THE MEADS PROGRAM.**

##### **1.0 General**

The United States proposed that the Participants in the MEADS program use the Patriot PAC-3 missile as the initial missile for the MEADS system. Germany and Italy have agreed to use the Patriot PAC-3 missile for the MEADS Program, pending final evaluation of performance information provided to them and confirmation that the PAC-3 missile can be integrated into the

system during RRE. This Annex outlines terms and conditions under which the Patriot PAC-3 missile will be incorporated for use in the MEADS Program.

## **2.0 Release of Technical Data/ Information**

The United States provided, as background information in accordance with the MEADS PD/V MOU (as amended), performance data on the PAC-3 missile, to allow Germany, Italy, and NAMEADSMA to evaluate the feasibility of incorporating the missile into the MEADS architecture, and its performance against the MEADS threat relative to the International Common Operational Requirements (ICOR). The prime contractor will be provided the data necessary to perform the Risk Reduction Effort in accordance with a time-phased release plan (TPRP) approved by the U.S. and noted by the Steering Committee. Among other performance data, performance modeling (6DOF) results and the test data used to validate the simulations will be provided. However, it is anticipated that certain design details and the associated 6DOF simulations of some components of the missile may not be made available during the Risk Reduction Effort. The TPRP, which addresses RRE and subsequent phases, will indicate which technical performance, design, and manufacturing details and data will be released, and will specify the process and timeline. The objective is to release all PAC-3 missile data for MEADS production. If there is any non-releasable data, it will be clearly identified in a timely manner. The Participants will make all necessary decisions on all requests for technology release far enough in advance of the award of the RRE contract to ensure that the RRE contract proposal is based upon the technologies approved by the Participants for release.

## **3.0 Test Data**

The U.S. will make available, without charge, relevant U.S. government owned test data from the Patriot PAC-3 test program, to the Participants of the MEADS program, and to the prime contractor, to avoid duplicate testing and validate performance predictions provided from U.S. PAC-3 simulations. Such data will include final test reports and a summary of results supporting the U.S. assessment of actual PAC-3 missile performance as it relates to the MEADS program.

## **4.0 Proprietary Data**

Certain data may be proprietary to the PAC-3 missile contractor. The U.S. will make the released data available which it has a right to use without violating the proprietary rights of its contract with the manufacturer, and will grant royalty free use of that data in accordance with the MEADS PD/V MOU (as amended). The Participants recognize, however, the U.S. government did not purchase for delivery a full technical data package or manufacturing data for the PAC-3 missile since it is procured to a performance specification, and the contractor maintains the complete data package. The U.S. Department of Defense will utilize its best efforts to assist in the licensing process for proprietary rights and sharing data among the industries of the Participants should these be required as a result of an industry agreement.

## **5.0 Management of the Missile**

The PAC-3 missile is considered an integral part of the MEADS system and as such will be part of the overall MEADS contractor-managed program. The prime contractor will integrate

the PAC-3 missile into the MEADS system, and will contract directly with the PAC-3 manufacturer. The prime contractor will be required to make appropriate arrangements with the PAC-3 contractor to:

- Achieve integration of the missile into the system,
- optimize the overall system performance including the baseline PAC-3 missile, towards the fulfillment of ICOR,
- conduct necessary digital simulations, based on an adequate understanding of subsystem performance, to predict and assess missile performance in the MEADS system architecture,
- establish work share arrangements and plans for production and in-service support among the participant industries; the U.S. will not direct the production arrangements.

For purposes of expediting initial deliveries of developmental test missiles, the MEADS Steering Committee may elect for the U.S. to obtain initial MEADS missiles under the provisions of existing U.S. contractual arrangements with the PAC-3 missile contractor. The U.S. requires that during RRE the missile remain "backward compatible" to the Patriot system. If changes are required to accommodate MEADS system integration that the U.S. desires to incorporate in the Patriot PAC-3 missile, such design information will be provided to the U.S. as foreground without charge for its own defense purposes. PAC-3 missile information, as delivered to the MEADS program for integration, is considered U.S. background information and it will be provided without charge.

Since the PAC-3 missile is an integral part of the MEADS system and part of the overall MEADS prime contractor managed program, design modifications deemed necessary for missile integration and subsequently adopted will be considered project foreground information. This does not, however, change the background information status of the "baseline" missile and its components under the MEADS PD/V MOU (as amended). U.S. restrictions may inhibit the export of elements of the PAC-3 missile hardware and software to the other participants during the RRE phase and early Design and Development (D&D), however, the objective is to remove these restrictions for the production phase in accordance with the TPRP.

As the ongoing developer, the U.S. will maintain configuration management and control of the Patriot PAC-3 missile, while NAMEADSMA and the prime contractor will maintain configuration management and control of any changes made to the PAC-3 missile within the MEADS program. The Participants agree, in principle, that the MEADS missile and the PAC-3 missile must maintain "backward and forward compatibility" to reap the benefits of a common missile. NAMEADSMA and the U.S. Program Executive Office for Air and Missile Defense (PEOAMD) shall develop a set of documentation defining the interfaces required to maintain backward and forward compatibility. Once a stable baseline is agreed, this documentation will not be changed without prior coordination between NAMEADSMA and the U.S. PEOAMD, and approval by the Steering Committee. MEADS interface verification with U.S. Patriot during RRE will normally be limited to analysis and simulation. This does not preclude conducting joint testing with U.S. Patriot if agreed by the Steering Committee. Upon completion of RRE, the Steering Committee will re-evaluate the benefit, feasibility, desirability, and cost to remain backward and/or forward compatible, and decide whether to continue with interface control.



#### 6.0 Third Party Sales and Transfers

The U.S. has the right to sell or transfer PAC-3 missiles built under its own contracts for use on Patriot systems to Third Parties without seeking agreement from the MEADS partners.

Modifications to the PAC-3 missile developed within the MEADS program will be considered as foreground modifications and the stipulations of the PD/V-MOU - Section XV - Third Party Sales and Transfers - will apply.

26. All other Sections and Annexes to the Memorandum of Understanding remain unchanged.

This Amendment shall enter into force on the date of latest signature and shall remain in force for the same period as the Memorandum of Understanding which it amends.

Done in triplicate in the English language.

FOR THE FEDERAL MINISTER  
OF DEFENSE OF THE FEDERAL  
REPUBLIC OF GERMANY

  
Signature

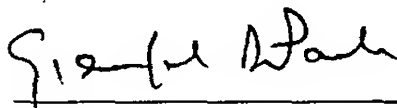
Dr. WEISE  
Name

Director of Armaments  
Title

Huntsville, AL  
Location

27 June 2001

FOR THE MINISTER OF DEFENSE  
OF THE REPUBLIC OF ITALY

  
Signature

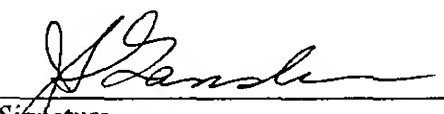
GIANPAOLO DI PAOLA  
Name

SECRETARY GENERAL FOR DEFENSE,  
DIRECTOR GENERAL ARMAMENTS  
Title

CETONA ITALY  
Location

April 26, 2002

FOR THE SECRETARY OF  
DEFENSE OF THE UNITED  
STATES OF AMERICA

  
Signature

Jacques S. Gansler  
Name

Under Secretary of Defense  
(Acquisition, Technology & Logistics)  
Title

Washington, DC  
Location

16 November 2000